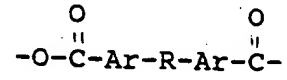
WHAT IS CLAIMED IS:

1. An aromatic polyanhydride comprising a repeating unit having the structure:



wherein Ar is a substituted or unsubstituted aromatic ring and R is a difunctional organic moiety substituted on each Ar ortho to the anhydride group.

2. The aromatic polyanhydride of claim 1, wherein Ar is a phenyl group and R is $-Z_1-R_1-Z_1-$, wherein R_1 is a difunctional organic moiety and Z_1 is a difunctional moiety selected from the group consisting of ethers, ester, amides, urethanes, carbamates and carbonates.

3. The aromatic polyanhydride of claim 2, wherein Z_1 is an ether, ester or amide group, and R_1 is selected from the group consisting of $(-CH_2-)_n$, $(-CH_2-CH_2-O-)_m$, $(-CH_2-CH_2-CH_2-O-)_m$, and $(-CH_2-CHCH_3-O-)_m$, wherein n is from 1 to 20, inclusive and m is selected so that R_1 has between 2 and 20 carbon atoms, inclusive.

4. The aromatic polyanhydride of claim 3, wherein n is 6.

5. The aromatic polyanhydride of claim 2, wherein R_1 is $-R_2-Z_2-R_3-$, wherein R_2 and R_3 are difunctional organic moieties and Z_2 is a difunctional moiety selected from the group consisting of ethers, esters, amides, urethanes, carbamates and carbonates.

6. The aromatic polyanhydride of claim 5, wherein R_2 and R_3 are independently selected from the group consisting of alkylene groups containing from 1 to 19 carbon atoms, $(-CH_2-CH_2-O-)_m$, $(-CH_2-CH_2-CH_2-O-)_m$, and $(-CH_2-CHCH_3-O-)_m$, wherein m is between 2 and 18, inclusive.

7. The aromatic polyanhydride of claim 1, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic salicylates, non-steroidal anti-inflammatory naphthyl or phenyl propionates, indomethacin, indoprofen, rosaprostal, antifibrotic aminobenzoates, midodrine, or vasoconstricting phenylethanolamimes.

8. The aromatic polyanhydride of claim 7, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form a therapeutic salicylate selected from the group consisting of thymotic acid, 4,4-sulfinyldinailine, 4-sulfanilamidosalicylic acid, sulfanilic acid, sulfanilylbenzylamine, sulfaloxic acid, succisulfone, salicylsulfuric acid, salsallate, salicylic alcohol, orthocaine, mesalamine, gentisic acid, enfenamic acid, cresotic acid, aminosalicylic acid, aminophenylacetic acid and acetylsalicylic acid.

9. The aromatic polyanhydride of claim 7, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic non-steroidal anti-inflammatory naphthyl or phenyl propionates selected from the group consisting of ibuprofen, ketoprofen and naproxin.

10. An implantable medical device comprising the aromatic polyanhydride of claim 1.

11. The implantable medical device of claim 10, wherein said device is a scaffolding implant for tissue reconstruction.

12. The implantable medical device of claim 10 comprising a biologically or pharmaceutically active compound in combination with said aromatic polyanhydride, wherein said active compound is present in amounts sufficient for therapeutically effective site-specific or systemic drug delivery.

13. The implantable medical device of claim 12, wherein said biologically or pharmaceutically active compound is covalently bonded to said aromatic polyanhydride.

14. A method for site-specific or systemic drug delivery comprising implanting in the body of a patient in need thereof an implantable drug delivery device comprising a therapeutically effective amount of a biologically or pharmaceutically active compound in combination with the aromatic polyanhydride of claim 1.

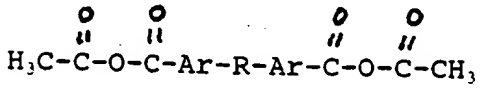
15. The method of claim 14, wherein said biologically or pharmaceutically active compound is covalently bonded to said aromatic polyanhydride.

16. A drug delivery system comprising the aromatic polyanhydride of claim 1 physically admixed with a biologically or pharmaceutically active agent.

17. A drug delivery system comprising a biologically or pharmaceutically active agent physically embedded or dispersed into a polymeric matrix formed from the aromatic polyanhydride of claim 1.

18. A drug delivery system comprising a biologically or pharmaceutically active agent covalently bonded to the aromatic polyanhydride of claim 1.

19. An ortho-substituted bis-aromatic dicarboxylic acid anhydride having the structure:



wherein Ar is a substituted or unsubstituted aromatic ring and R is a difunctional organic moiety substituted on each Ar ortho to the anhydride group.

20. The acid anhydride of claim 19, wherein Ar is a phenyl group and R is $-Z_1-R_1-Z_1-$, wherein R_1 is a difunctional organic moiety and Z_1 is a difunctional moiety selected from the group consisting of ethers, esters, amides, urethanes, carbamates and carbonates.

21. The acid anhydride of claim 20, wherein Z_1 is an ether, ester or amide group, and R_1 is selected from the gourp consisting of $(-CH_2)_n$, $(-CH_2-CH_2-O-)_m$, $(-CH_2-CH_2-CH_2-O-)_m$ and $(-CH_2-CHCH_3-O-)_m$, wherein n is from 1 to 20, inclusive, and m is selected so that R_1 has between 2 and 20 carbon atoms, inclusive.

22. The acid anhydride of claim 21, wherein n is 6.

23. An ortho-substituted bis-aromatic dicarboxylic acid having the structure HOOC-Ar-R-Ar-COOH, wherein Ar is a substituted or unsubstituted aromatic ring and R is a difunctional organic moiety on both Ar rings ortho to each carboxylic acid group.

24. The dicarboxylic acid of claim 23, wherein Ar is a phenyl group and R is $-Z_1-R_1-Z_1-$, wherein R_1 is a difunctional

organic moiety and Z_1 is a difunctional organic moiety selected from the group consisting of ethers, esters, amides, urethanes, carbamates and carbonates.

25. The dicarboxylic acid of claim 24, wherein Z_1 is an ether, ester or amide group, and R_1 is selected from the group consisting of $(-CH_2)_n$, $(-CH_2-CH_2-O-)_m$, $(-CH_2-CH_2-CH_2-O-)_m$ and $(-CH_2-CHCH_3-O-)_m$, wherein n is from 1 to 20, inclusive, and m is selected to that R_1 has between 2 and 20 carbon atoms, inclusive.

26. The dicarboxylic acid of claim 25, wherein n is 6.

27. A method for treating inflammation comprising administering to a patient in need thereof a quantity of the aromatic polyanhydride of claim 1, Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic salicyclates, phenyl or naphthyl propoinic acids, indomethecin or indoprofen at the site of said inflammation in an amount effective to relieve said inflammation.

28. The method of claim 27, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form a therapeutic salicylate selected from the group consisting of thymotic acid, 4,4-sulfinyldinailine, 4-sulfanilamidosalicylic acid, sulfanilic acid, sulfanilylbenzylamine, sulfaloxic acid, succisulfone, salicylsulfuric acid, salsallate, salicylic alcohol, orthocaine, mesalamine, gentisic acid, enfenamic acid, cresotic acid, aminosalicylic acid, aminophenylacetic acid and acetylsalicylic acid.

29. The method of claim 27, wherein Ar and Z are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic non-steroidal anti-inflammatory naphthyl or phenyl propionates selected from the group consisting of ibuprofen, ketoprofen and naproxin.

30. The method of claim 27, wherein said aromatic polyanhydride is administered orally.

31. A therapeutic method comprising administering to a patient in need thereof an effective amount of an aromatic polyanhydride according to claim 1, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form rosaprostol, antifibrotic aminobenzoates, midodrine or vasonconstricting phenylethanolamines.

32. The method of claim 31, wherein said aromatic polyanhydride is administered orally.

33. An anti-inflammatory oral dosage form consisting essentially of an effective amount of the aromatic polyanhydride of claim 1, and a pharmaceutically acceptable excipient, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic salicylates, phenyl or naphtyl propionic acids, indomethecin, or indoprofen.

34. The oral dosage form of claim 33, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form a therapeutic salicylate selected from the group consisting of thymotic acid, 4,4-sulfinyldinailine, 4-sulfanilamidosalicylic acid, sulfanilic acid, sulfanilylbenzylamine, sulfaloxic acid, succisulfone,

salicylsulfuric acid, salsallate, salicylic alcohol, orthocaine, mesalamine, gentisic acid, enfenamic acid, cresotic acid, aminosalicylic acid, aminophenylacetic acid and acetylsalicylic acid.

35. The oral dosage form of claim 33, wherein Ar and Z are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic non-steroidal anti-inflammatory naphthyl or phenyl propionates selected from the group consisting of ibuprofen, ketoprofen and naproxin.

36. The oral dosage form of claim 33, further comprising a second therapeutic agent to be administered in combination with said polyanhydride.

37. A method for treating digestive inflammation comprising orally administering to a patient in need thereof a quantity of the aromatic polyanhydride of claim 1, wherein Ar and R are selected so that said aromatic polyanhydride hydrolyzes to form therapeutic salicyclates at the site of said inflammation in an amount effective to relieve said inflammation.

38. The method of claim 37, wherein said therapeutic salicylate is selected from the group consisting of thymotic acid, 4,4-sulfinyldinailine, 4-sulfanilamidosalicylic acid, sulfanilic acid, sulfanilylbenzylamine, sulfaloxic acid, succisulfone, salicylsulfuric acid, salsallate, salicylic alcohol, orthocaine, mesalamine, gentisic acid, enfenamic acid, cresotic acid, aminosalicylic acid, aminophenylacetic acid and acetylsalicylic acid.

39. A therapeutic treatment method comprising administering to a patient in need thereof an effective quantity of an aromatic polyanhydride according to claim 1, wherein Ar and R are selected so that said aromatic

polyanhydride hydrolyzes to form rosaprostal, antifibrotic aminobenzoates, midodrine, or vasoconstricting phenylethanolamines.

40. The method of claim 39, wherein said aromatic polyanhydride is administered orally.